Edoardo M. Ponti

Curriculum Vitae

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Education

October 2020 **Postdoctoral Fellow**, School of Computer Science, Mila - Quebec Al Institute / - September McGill University (Montreal, Quebec, Canada).

2021 Siva Reddy's Lab.

October 2016 Ph.D. in Computational Linguistics, Language Technology Lab, University of

- September Cambridge (United Kingdom).

2020 Supervised by Anna Korhonen. Affiliated to St John's College.

January - Visiting Student, at Vrije Universiteit, Amsterdam (Netherlands).

March 2016 Part of the ERC-funded NewsReader project for story extraction and generation.

October 2014 Master in Theoretical and Applied Linguistics, University of Pavia (Italy).

- July 2016 Thesis title: *Identifying Causal Relations between Events with Artificial Neural Networks.* 110/110 with honours and publication recommended (extremely rare).

October 2011 Diploma in Human Sciences, Neuroscience and Teoretical Syntax, Institute of

July 2016 Advanced Study (IUSS), Pavia (Italy).
 Highest grade and publication recommended.

2014 and **Erasmus exchanges**, at the University of Helsinki, Finland, and the University of

2016 Cambridge, United Kingdom.

October 2011 Bachelor's Degree in Modern Literature, University of Pavia (Italy).

- July 2014 Thesis title: Partitive subject in Finnish. 110/110 with honours. Affiliated to Ghislieri College.

Publications

arXiv Preprints

- 1. **Ponti, Edoardo Maria***, Goran Glavaš*, Olga Majewska, Qianchu Liu, Ivan Vulić, and Anna Korhonen. 2020. *XCOPA: A Multilingual Dataset for Causal Commonsense Reasoning*. arXiv-2005
- 2. **Ponti, Edoardo Maria**, Ivan Vulić, Ryan Cotterell, Marinela Parovic, Roi Reichart, and Anna Korhonen. 2020. *Parameter Space Factorization for Zero-Shot Learning across Tasks and Languages*. arXiv:2001.11453
- 3. Vulić, Ivan*, Simon Baker*, **Edoardo Maria Ponti***, Ulla Petti, Ira Leviant, Kelly Wing, Olga Majewska et al. 2020 *Multi-SimLex: A Large-Scale Evaluation of Multilingual and Cross-Lingual Lexical Semantic Similarity*. arXiv:2003.04866
- 4. Lauscher, Anne, Ivan Vulić, **Edoardo Maria Ponti**, Anna Korhonen, and Goran Glavaš. 2019. *Informing Unsupervised Pretraining with External Linguistic Knowledge*. arXiv:1909.02339

Peer-Reviewed Conference Papers

- 1. **Ponti, Edoardo Maria**, Ivan Vulić, Ryan Cotterell, Roi Reichart, Anna Korhonen. 2019. *Towards Zero-shot Language Modeling*. In Proceedings of EMNLP 2019.
- 2. **Ponti, Edoardo Maria**, Ivan Vulić, Goran Glavaš, Roi Reichart, Anna Korhonen. 2019. *Crosslingual Semantic Specialization via Lexical Relation Induction*. In Proceedings of EMNLP 2019.
- Kamath, Aishwarya, Jonas Pfeiffer, Edoardo Maria Ponti, Goran Glavaš, and Ivan Vulić. 2019. Specializing Distributional Vectors of All Words for Lexical Entailment. In Proceedings of RepL4NLP-2019.
- 4. **Ponti, Edoardo Maria**, Ivan Vulić, Goran Glavaš, Nikola Mrkšić and Anna Korhonen. *Adversarial Propagation and Zero-Shot Cross-Lingual Transfer of Word Vector Specialization*. In: Proceedings of EMNLP 2018.
- 5. Gerz, Daniela, Ivan Vulić, **Edoardo Maria Ponti**, Roi Reichart and Anna Korhonen. *On the Relation between Linguistic Typology and (Limitations of) Multilingual Language Modeling*. In: Proceedings of EMNLP 2018.
- 6. **Ponti, Edoardo Maria**, Roi Reichart, Anna Korhonen and Ivan Vulić. 2018. *Isomorphic Transfer of Syntactic Structures in Cross-lingual NLP*. In: Proceedings of ACL 2018.
- 7. **Ponti, Edoardo Maria**, Ivan Vulić and Anna Korhonen. 2017. *Decoding Sentiment from Distributed Representations of Sentences*. In: Proceedings of *SEM 2017. 30 July 4 August 2017, Vancouver (British Columbia, Canada).
- 8. **Ponti, Edoardo Maria** and Anna Korhonen. 2017. *Event-Related Features in Feedforward Neural Networks Contribute to Identifying Implicit Causal Relations in Discourse*. In: Proceedings of the Workshop on Linking Models of Lexical, Sentential and Discourse-level Semantics. 3-7 April 2017, Valencia (Spain).
- 9. **Ponti, Edoardo Maria** and Marco Passarotti. 2016. *Diversity Makes Composition. A Slower-paced and Reliable Parser for Latin.* In Proceedings of the Conference on Language Resources and Evaluation (LREC'16). 23–28 May 2016, Portorož (Slovenia).
- Ponti, Edoardo Maria. 2016. Divergence from Syntax to Linear Order in Ancient Greek Lexical Networks. In Proceedings of The 29th International Florida Artificial Intelligence Research Society Conference (FLAIRS 29). 16–18 May 2016, Key Largo (Florida, USA).

Journal Articles

- 1. **Ponti, Edoardo Maria**, Helen O'Horan, Yevgeni Berzak, Ivan Vulić, Roi Reichart, Thierry Poibeau, Ekaterina Shutova, and Anna Korhonen. 2019. *Modeling language variation and universals: A survey on typological linguistics for natural language processing*. Computational Linguistics, 1-43.
- 2. Gerz, Daniela, **Edoardo Maria Ponti**, Ivan Vulić, Jason Naradowsky, Roi Reichart, and Anna Korhonen. 2018. *Language Modeling for Morphologically Rich Languages: Character-Aware Modeling for Word-Level Prediction*. Transactions of the Association for Computational Linguistics (TACL) 6:451-465.
- 3. **Ponti, Edoardo Maria** and Silvia Luraghi. 2018. *Non-configurationality in diachrony: Correlations in local and global networks of Ancient Greek and Latin.* Diachronica 35(3).
- 4. **Ponti, Edoardo Maria**, Elisabetta Ježek and Bernardo Magnini. 2017. *Distributed Representations of Lexical Sets and Prototypes in Causal Alternation Verbs*. Italian Journal of Computational Linguistics, 3.1.

Book Editor

1. **Ponti, Edoardo Maria** and Marco Budassi (eds.). 2016. *Compter parler soigner. Between Linguistics and Artificial Intelligence.* Pavia University Press, Pavia.

Job Experience

- Jul Sep Internship in AI / ML at Apple, Cupertino (California, U.S.).
 - 2019 International features of Siri.
- Oct Dec Internship at the Bruno Kessler Foundation (FBK), Trento (Italy).
 - 2015 Topology of word embeddings of lexical sets.
- Feb May Internship at CIRCSE, University of the Sacred Heart, Milano (Italy).
 - 2015 Ensemble methods for dependency parsing of Latin (Index Thomisticus).

Teaching Experience

Supervisor

- Oct 2017 Computational Linguistics, University of Cambridge (U.K.).
- May 2019 Department of Theoretical and Applied Linguistics. For two years: A.Y. 17/18 and 18/19
 - Demonstrator
- Oct 2017 Machine Learning and Real-world Data, University of Cambridge (U.K.).
- May 2018 Computer Lab, Faculty of Computer Science and Technology.

Thesis Advisor

Master's thesis, Jia Wan, Huilei Wang. **Bachelor's thesis**: Bonamy Meath-Baker. University of Cambridge

Summer Schools

Jul 2017 **Generative Lexicon: Integrating Theoretical and Distributional Methods**, Preparation of ESSLLI 2017 course material, Toulouse, France.

Tutorials

Nov 2019 **Semantic Specialization of Distributional Word Vectors**, Tutorial at EMNLP-IJCNLP 2019, Hong Kong, China.

Conference Organization

Aug 2019 - **TyP-NLP - Typology for Polyglot Natural Language Processing**, Workshop Nov 2020 at ACL 2019 (Firenze, Italy) and EMNLP 2020 (Punta Cana, Dominican Republic).

Feb 2019 St John's College Graduate Symposium, Cambridge (U.K.).

Service

Publicity/Sponsorship Chair, CoNLL 2018.

Program Co-Chair Assistant, ACL 2019.

Area Chair, EACL 2021.

Reviewer, ACL 2018, EMNLP 2018, NAACL 2019, *SEM 2019, ACL 2019, EMNLP 2019, AAAI 2019, ACL 2020 (Outstanding Reviewer), EMNLP 2020, Artificial Intelligence, Natural Language Engineering, Language Resources and Evaluation, Journal of Historical Linguistics.

Co-founder and Committee Member, *ACL Special Interest Group on Typology* (*SIGTYP*).

Funds and Awards

Mar 2020 ERC Proof-of-Concept Grant.

Project 'Enabling Multilingual Conversational Al', co-written with Anna Korhonen (PI), and Ivan Vulić $\leqslant 150,000$.

Aug 2019 Best Paper Award at Repl4NLP 2019.

For the paper "Specializing Distributional Vectors of All Words for Lexical Entailment", co-written with Aishwarya Kamath, Jonas Pfeiffer, Goran Glavaš and Ivan Vulić

Mar 2019 Google Faculty Research Award.

Project "Automatic Induction and Adaptation of Syntactic Structures for Improved Cross-Lingual NLP", co-written with Anna Korhonen (PI), Roi Reichart, and Ivan Vulić \$60,841 USD

- Oct 2016 **ERC studentship**, University of Cambridge (United Kingdom).
- June 2019 Project LEXICAL: Lexical Acquisition across Languages (code GZ08825). £21K/year for 3 years.
 - 2016 **Self-placed Fulbright Scholarship**, U.S.A. Offer of a \$38K grant and \$1.1K travel allowance (declined).
- Dec 2016 **Young researcher best paper award**, Naples (Italy).

 3rd Italian Conference of Computational Linguistics.
- Sep 2011 Award from the Institute for Advanced Study, Pavia (Italy).
 - Jul 2016 Around €2.5K awarded annually (for 5 years) to students who fulfil merit criteria.
 - 2014 **Scholarship from Collegio Ghislieri**, Pavia (Italy).

 One-year free board and lodging for the best student in contest (score 78/80).

Technical Skills

 \circ Programming languages: Python, C++, R

o Deep learning libraries: PyTorch, TensorFlow, Theano

Linguistic Skills

Italian Native speaker

English Fluent IELTS 8

Finnish Intermediate

German Beginner Start Deutsch 2 - Goethe-Institut